



Combined Test Force

Truth Through Testing

The Combined Test Force (CTF) is responsible for testing the Ballistic Missile Defense System (BMDS) to deliver an integrated and effective capability to the Warfighter.

Following program element testing of components, subsystems, and systems early in the development cycle, the CTF conducts system-level testing to:

- Demonstrate BMDS capabilities
- Collect data to verify BMDS design and assess BMDS capabilities
- Identify areas the BMDS can be improved
- Collect data to validate BMDS models and simulations
- Support the Early, Partial, and Full Capability Delivery processes defined in the Master Fielding Plan



Systems engineers, program elements, and the BMDS Operational Test Agency Team work cooperatively to develop system test objectives and requirements. These objectives and requirements factor in the needs of participating elements, the availability and capabilities of test tools, and the configuration constraints of the test venues. Three basic test methods verify system capability:

- Ground Tests
 - Exercise components and subsystems to characterize and assess system-level capabilities, performance, and integration into the BMDS
 - Analyze functional interfaces between components, evaluate target/intercept boundary conditions, and collect data to support modeling and simulation
 - Use a variety of controllable and flexible testing venues, from high-fidelity hardware-in-the-loop tests to operator-in-the-loop interactions
 - Provide a cost-effective means to regularly measure technology readiness levels of components and subsystems
- Flight Tests
 - Demonstrate, characterize, and assess system-level capabilities and performance of the integrated BMDS and subsystems
 - Demonstrate functionality and interoperability among BMDS subsystems in relevant and operational environments
 - Provide data to assess BMDS performance against performance goals
 - Characterize capabilities to defeat the evolving threat
- Modeling and Simulation
 - Provides an efficient method to collect the voluminous data necessary to measure system performance
 - Relies on ground and flight test program data as a foundation for both developing the BMDS and for gaining confidence in its performance
 - Uses a system-level approach to ensure consistency across program elements and increase fidelity in tools used for ground testing, war games, and performance assessment

The CTF is located in Huntsville, Ala., with coordination teams in the National Capital Region and at the Missile Defense Integration and Operations Center (MDIOC) in Colorado Springs, Colo. The organization consists of four divisions:

- Test Planning and Design Division – Conducts campaign-level test planning and design functions
- Test Operations Division – Provides detailed test planning, pre-test field integration, and test execution
- Test Analysis and Reporting Division – Performs test data management, analysis, and reporting
- Support Division – Executes test configuration and test schedule change management